APPARATUS AND METHOD FOR HAIRPINNING DATA
PACKETS IN AN ETHERNET MAC CHIP

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ABSTRACT OF THE DISCLOSURE

A router for interconnecting N interfacing peripheral devices. The router comprises routing nodes coupled to one another via switching circuitry. A first routing nodes comprises: 1) a physical medium device (PMD) module for transmitting data packets to and receiving data packets from the N interfacing peripheral devices; 2) an ingress processor for receiving incoming data packets from the PMD module; 3) an egress processor for transmitting data packets to the PMD module; and 4) a medium access control (MAC) processor for forwarding data packets from the ingress processor to the switching circuitry and forwarding data packets from the switching circuitry to the egress processor. The MAC processor determines whether a first data packet received from the ingress processor is directed to the egress processor and, if so, transfers the first data packet directly to the egress processor without forwarding the first data packet through the switching circuitry.